SONY

Cassette-corder

TCM-27

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model number is located on the left side and the serial number is located in the battery compartment. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. TCM-27   Serial No. _____

Features

- With the time-index-recording function the date and time of recording and a memo appear in the display window during tape playback.
- Timer function starts the tape playback and recording at any desired time with the built-in timer.

- Cue marker and auto-stop function for searching for a particular point quickly.

Precautions

On operation
- Operate the unit on 3 V DC.
  For AC operation or car battery operation, use accessories recommended for the unit.
- Do not leave the unit in a location near heat sources, in a place subject to direct sunlight, excessive dust, sand, moisture, rain, mechanical shock, in the direct sunlight, temperature below 5°C, or in a car with its windows closed.
- If the unit has not been used for a long time, set it in playback mode and warm it up for a few minutes before inserting a cassette.
- Should any solid object or liquid fall into the unit, remove the batteries and disconnect the AC power adaptor, and have the unit checked by qualified personnel before operating it any further.

- Since a strong magnet is used for the speaker, keep personal credit cards using magnetic coding or spring-wound watches away from the unit to prevent possible damage from the magnet.
- The nameplate indicating operating voltage, etc. is located on the bottom.

Note on cassettes longer than 90 minutes
The use of cassettes longer than 90 minutes is not recommended except for long continuous playback.

If you have any question or problem concerning your unit that is not covered in this manual, please consult your nearest Sony dealer.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
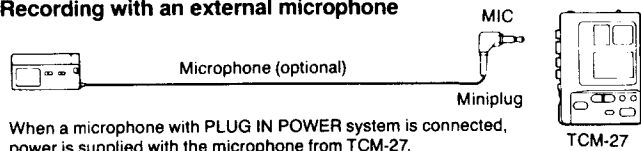
Reorient the receiving antenna
Relocate the equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment and receiver are
on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
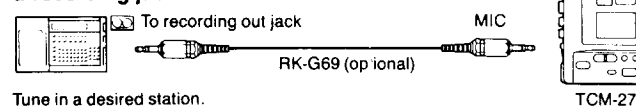"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No.004-000-00345-4.
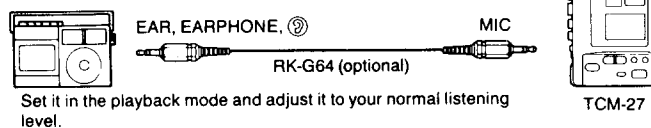
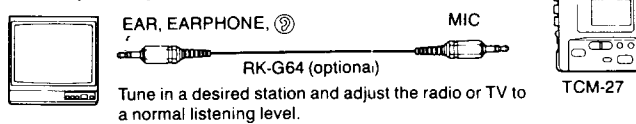## Connections/Preparations

Recording with an external microphone

Microphone (optional)

MIC

Miniplug

When a microphone with PLUG IN POWER system is connected, power is supplied with the microphone from TCM-27.

TCM-27

Dubbing from another cassette-corder

EAR, EARPHONE, ⊚

MIC

RK-G64 (optional)

Set it in the playback mode and adjust it to your normal listening level.

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Recording from a radio or TV equipped with a recording jack

To recording out jack

MIC

RK-G69 (optional)

Tune in a desired station.

TCM-27

Recording from a radio or TV equipped with an earphone jack

EAR, EARPHONE, ⊚

MIC

RK-G64 (optional)

Tune in a desired station and adjust the radio or TV to a normal listening level.

TCM-27

If your radio, TV, etc., is not Sony product, refer to the instruction manual of that unit.

Recording with the Built-in Microphone

● REC

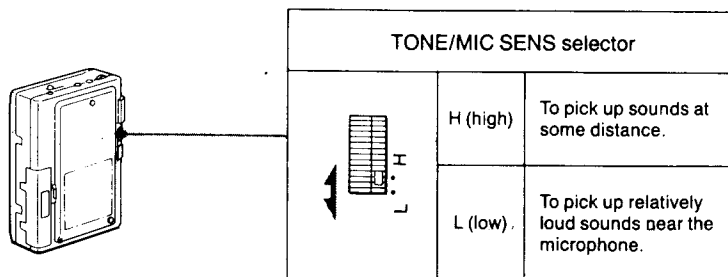The ▼ button is depressed automatically.

REC/BATT
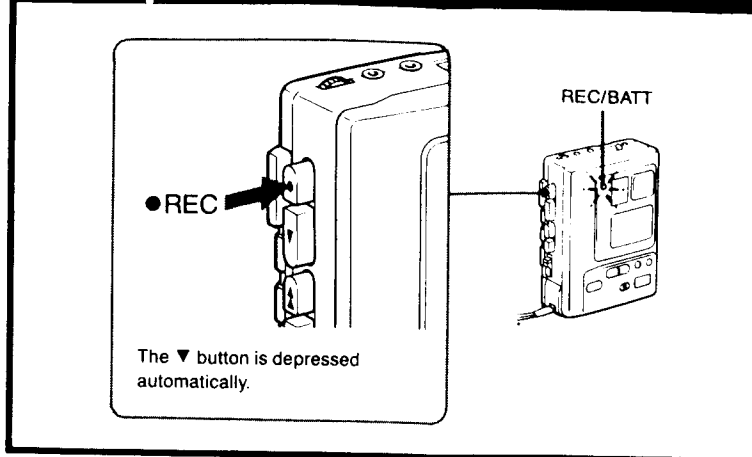
No recording level adjustment is necessary.
The sound to be recorded can be listened with the optional earphone.

Notes
• Do not press the built-in microphone forcibly.
• When monitoring with the earphone, do not set the volume too high. Otherwise, a howling effect may occur.

Adjusting the Microphone Sensitivity

TONE/MIC SENS selector		
	H (high)	To pick up sounds at some distance.
	L (low)	To pick up relatively loud sounds near the microphone.

To review the portion just recorded
Simply depress the ▲ button while recording.
By releasing the ▲ button, the recorder will go into the playback mode for review of the recorded material.
To start recording again, depress the ● button.

To correct a previously recorded portion
During playback, simply depress the ● button and the recorder will immediately change to the recording mode.

Notes
• Make sure that nothing is connected to the MIC jack.
  Otherwise, a recording with the built-in microphone cannot be made.
• When you record with an external microphone, you cannot adjust the microphone sensitivity.

To pick up the speaker's voice more clearly at the conference
Place the unit on a table horizontally for maximum performance of the built-in flat microphone (Sony Boundary Effect system).
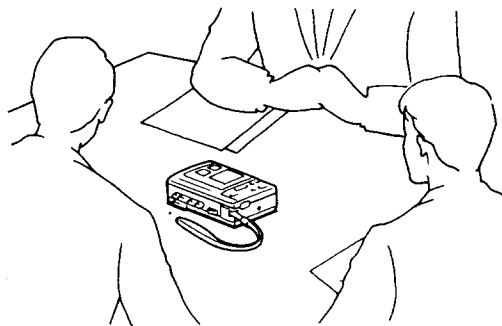
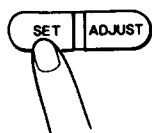# Recording from Various Sound Sources

To record, depress the ● button of the TCM-27 after completing the connections and preparations below.

Entering a Memo during Recording —Time-Index-Recording Function

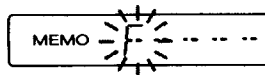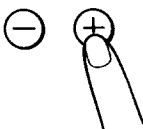You can create a memo or a label of up to 5 letters for the material to be recorded.

1 Press SET.

A blinking cursor (indicating where a letter can be entered) will appear.

2 Press + or −, until the first letter you want appears.

Example: If + is pressed 6 times, F will appear.

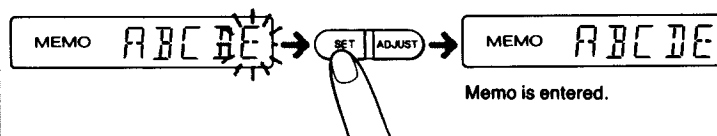**3** Press to move the cursor to the next position, and use either + or − to select the next letter.
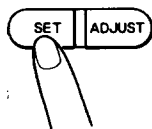
4 Repeat steps 2 and 3 to complete the memo.

5 After setting the fifth letter, press SET.

(If you want to use fewer than 5 letters, press SET several times to complete the setting.)

Memo is entered.

6 Start recording.

(The date and time will be entered automatically.)

If you want to change the memo, follow the procedure from step 1. If you want to change the memo while recording, stop the cassette for a moment with the PAUSE switch.

37 characters and a space can be used for the memo.

Each time + is pressed, characters will appear in the following order.

```
-ABCDEFGHIJKLMNOPQR
STUVWXYZ0123456789 (Space)
```
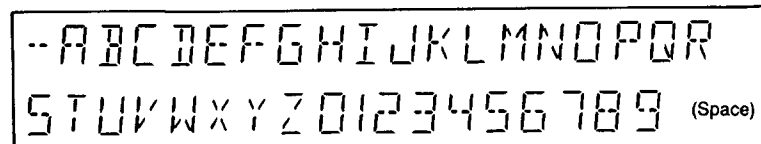
Use – button to go back to a previous character.

Note
- When recording, use only TYPE I tapes. If you use another type of tape, the time-index-recording may not function.
- For the time-index-recording function, it is necessary to record continuously for more than 10 seconds. If the recording is less than 10 seconds, you cannot enter the memo, date, or time.

Assigning a Cue Marker During Recording

Press at the position you want to listen to afterward.
CUE MARKER indicator lights up and a cue marker is assigned.

You can locate the cue marker position quickly by pressing FF/CUE or REW/REVIEW button during playback. (See "Locating the CUE MARKER position".)

When recording starts (including after a pause)
A cue marker is assigned automatically.

When you will not use the auto stop function
Slide AUTO STOP switch to OFF.

Notes on the cue marker
* You can assign as many cue markers as you want.
* If you press STOP immediately after pressing CUE MARKER, the cue marker is not assigned.
* After pressing CUE MARKER, wait until the indicator goes out before continuing to record.
* When you play back the tape recorded with a long passage of low frequency sound, the unit may not function correctly.
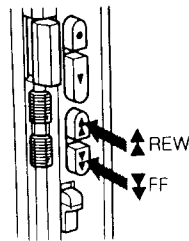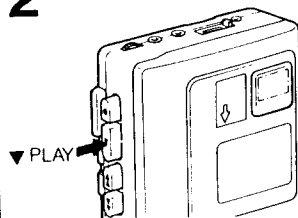
Locating the Cue Marker Position —Auto Stop Function

1

Slide AUTO STOP switch to ON.

2

Keeping PLAY depressed, press ⬆ REW/REVIEW or ⬇ FF/CUE button continuously.

3

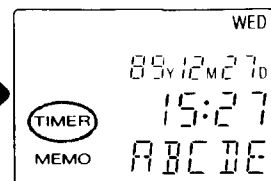At the cue marker position, the cassette stops automatically.
Release ⬆ REW/REVIEW or ⬇ FF/CUE button to start play back.

Recording with the Timer
—Timer Function

1

DISPLAY MODE

Display
TIMER indication.

→

WED
89Y12M27D
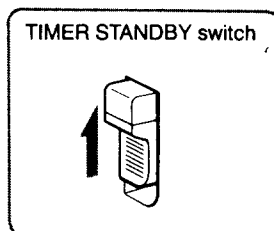TIMER
15:27
MEMO
ABCDE

2

Set the timer for the date and the time
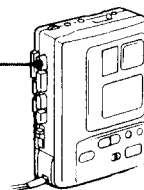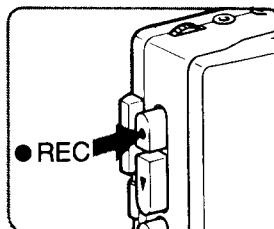you want recording to begin.
(See How to Set the Date/Time.)

3

If you want to make a label for the
material to be recorded, enter a memo.
(See Entering a Memo during Recording.
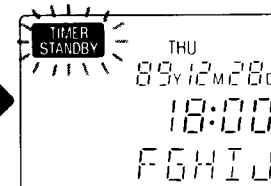**Be sure to set the timer before entering
a memo.)**

4

TIMER STANDBY switch

5

●REC

appears

TIMER STANDBY

THU
89Y12M28D
18:00
FGHIJ

→
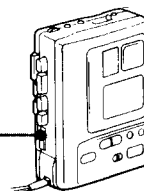
Recording will start automatically at the time set.
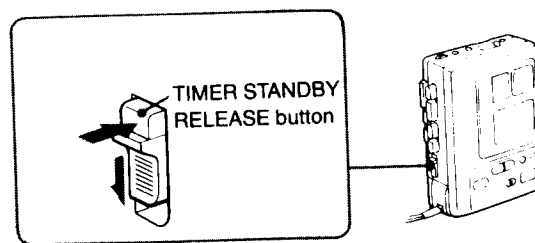
When entering a memo
Be sure to set the timer before entering a memo. You cannot enter a memo
before setting the timer.

You can start the playback at the time set.
For the step 5, press ▲ button in place of ● button.

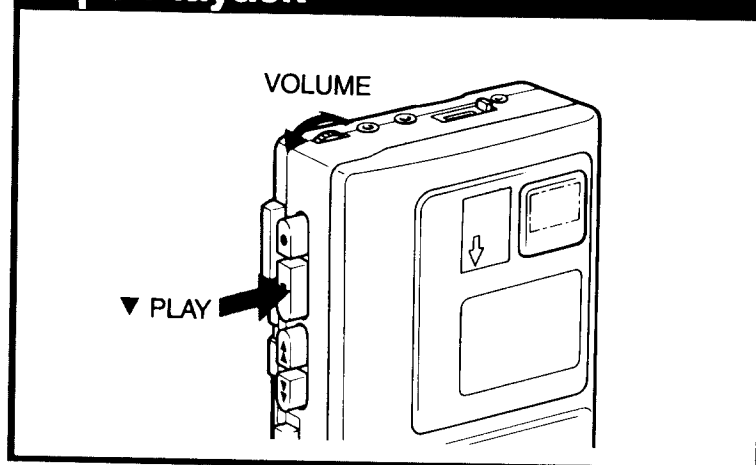**To Release the TIMER STANDBY Switch before the Preset Time**
Press the ■▲ button and press the TIMER STANDBY RELEASE button.
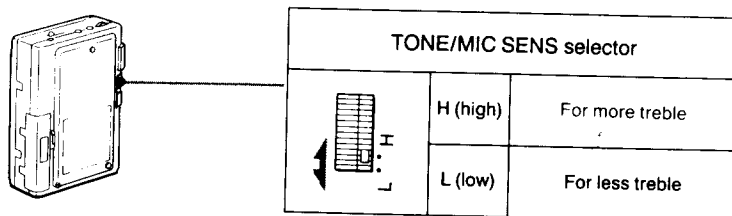
TIMER STANDBY RELEASE button

To check the time set for the timer recording
Press DISPLAY MODE so that "TIMER" indication appears. The indication displayed is the time set.
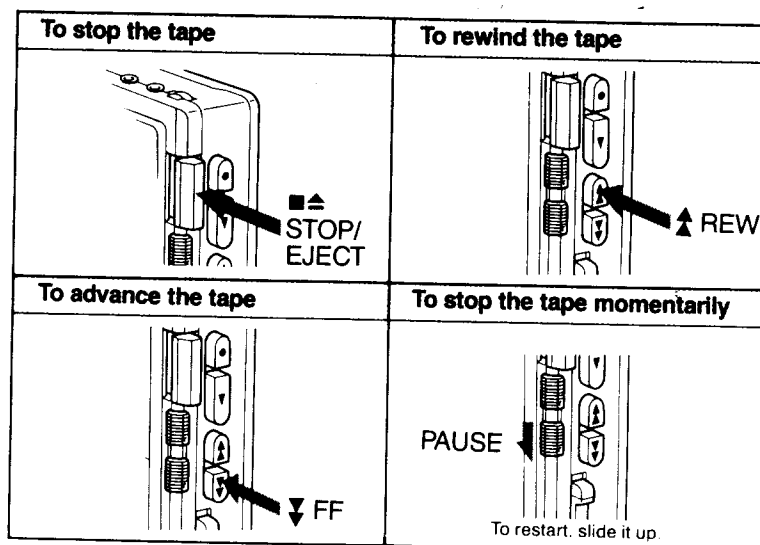
Tape Playack

VOLUME

▼ PLAY

To adjust the tape playback tone

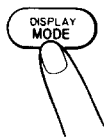| TONE/MIC SENS selector		
	H (high)	For more treble
	L (low)	For less treble

To locate a desired position during tape playback

Keep pressing the ▲ or ▼ button during playback. At the desired point found by listening to the high-speed sound, release the pressed button to restart playing back.
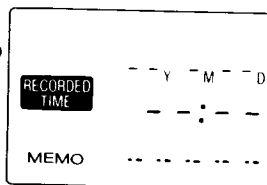
To stop the tape	To rewind the tape
■▲ STOP/ EJECT	▲ REW
To advance the tape	**To stop the tape momentarily**
▼ FF	PAUSE To restart, slide it up.

Displaying the Memo and Date/Time during Playback

1

Press during playback to display the "RECORDED TIME" indication.

```
RECORDED    - -Y -M- - D
  TIME
            - -:- -
MEMO        -- -- -- -- --
```

2

The date and time of recording and the memo will be displayed after a short time.

```
                      WED
RECORDED    89Y 12M 27D
  TIME
            15:27
MEMO        ABCDE
```
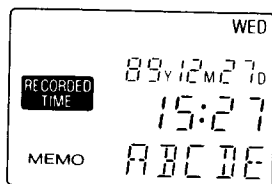
Information Display

Each time you press DISPLAY MODE, the display changes in the order indicated by the arrows.

| Current date/time display |

"CLOCK" indication is displayed. The current date and time are indicated.

| Timer display |

"TIMER" indication is displayed. The date and time set for the timer are displayed. (When the timer is not set, the current date and time is displayed.)
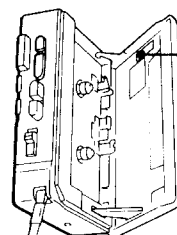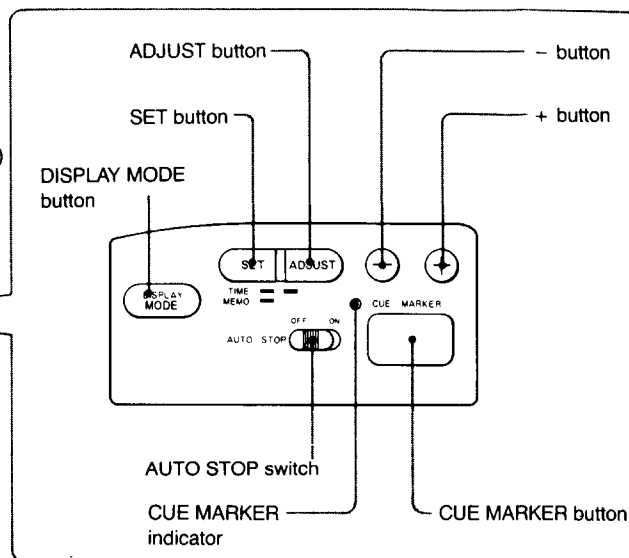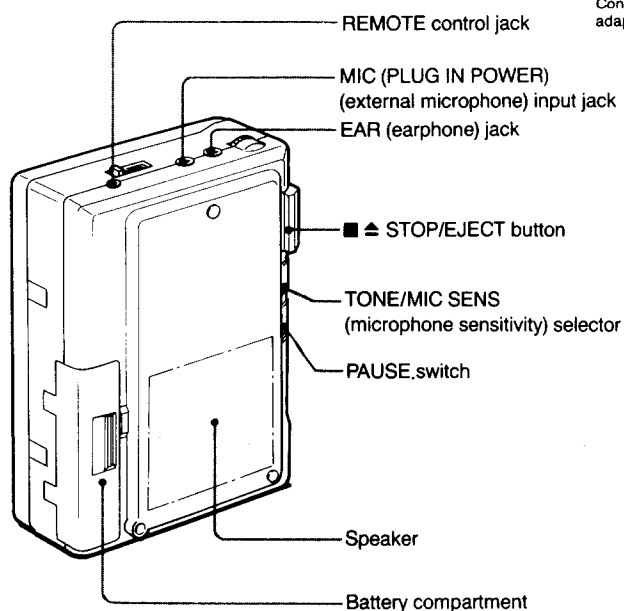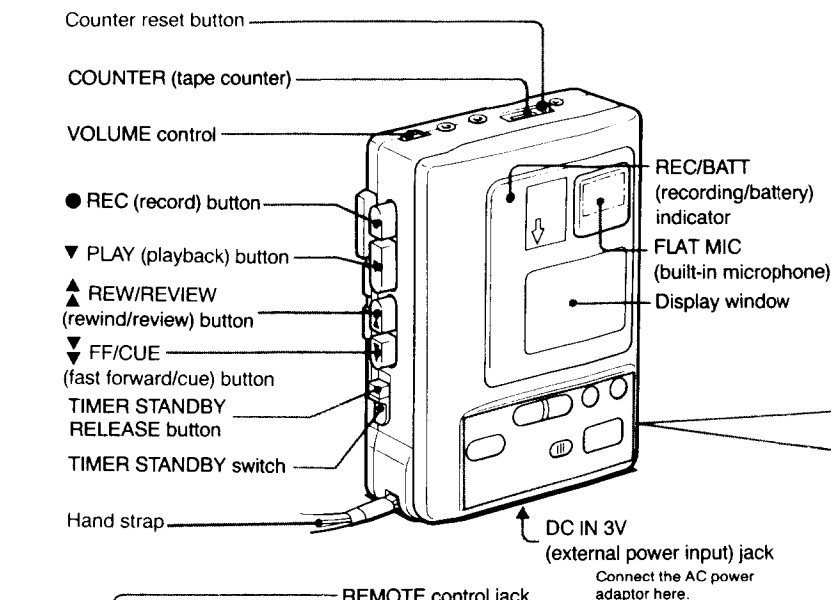
| Memo display |

"RECORDED TIME" indication is displayed. The date and time of the recording and the memo will be displayed only during playback (not during recording).

Note

After displaying the date and time of recording and the memo, the indications remain displayed if you play back a cassette recorded on equipment other than the TCM-27.

Parts Identification

Counter reset button

COUNTER (tape counter)

VOLUME control

● REC (record) button

▼ PLAY (playback) button

▲ REW/REVIEW
(rewind/review) button

▼ FF/CUE
(fast forward/cue) button

TIMER STANDBY
RELEASE button

TIMER STANDBY switch

Hand strap

REC/BATT
(recording/battery)
indicator

FLAT MIC
(built-in microphone)

Display window

DC IN 3V
(external power input) jack
Connect the AC power
adaptor here.

REMOTE control jack

MIC (PLUG IN POWER)
(external microphone) input jack

EAR (earphone) jack

■ ▲ STOP/EJECT button

TONE/MIC SENS
(microphone sensitivity) selector

PAUSE switch

Speaker

Battery compartment

ADJUST button

SET button

DISPLAY MODE
button

– button

+ button

DISPLAY
MODE

TIME
MEMO

SET   ADJUST

OFF   ON

AUTO STOP

CUE MARKER

AUTO STOP switch
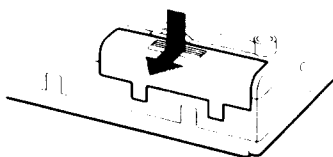
CUE MARKER
indicator

CUE MARKER button

RESET button
Press this button with a ballpoint pen or
similar object after battery replacement
or when no button or control functions.
(Do not use something that breaks easily
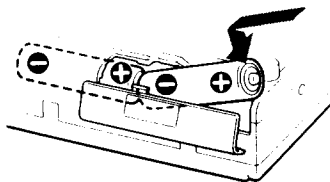like the lead point of a pencil.)

Installing Batteries

1

(Rear)

2

Insert two size AA (R6) batteries with correct polarity.

Battery replacement
During tape playback, when the indicator glows faintly and sound becomes distorted or unstable, replace both batteries.
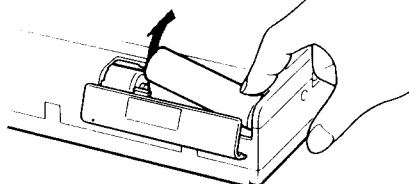On battery life and other power sources, see "Specifications".

To keep the preset memories
Replace the batteries **within two minutes.**
The memories of the current time and a memo will be erased about two minutes after the batteries are removed.
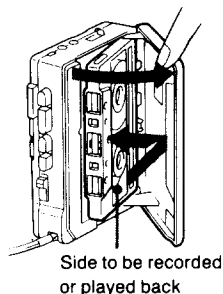
To remove

When no button functions after replacing the batteries
Press the RESET button, and preset the indications.

Inserting a Cassette

Before inserting the cassette, take up any slack in the tape with a thick pencil.
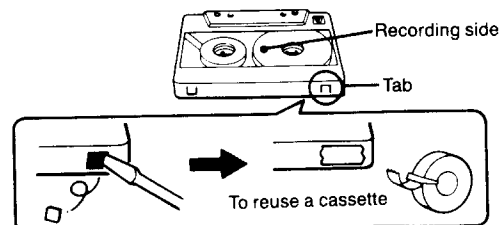
Side to be recorded or played back

To prevent accidental erasure
Break out the tab corresponding to the side to be recorded on.
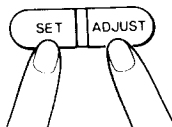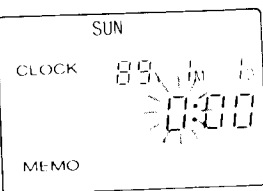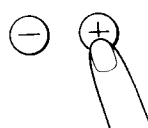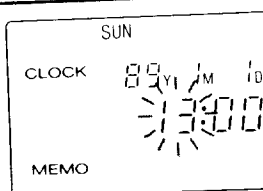Recording on that side will be protected.

Recording side

Tab

To reuse a cassette
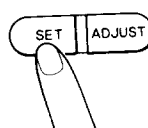
How to Set the Date/Time

You cannot set the clock during tape playback or recording.
If "CLOCK" indication is not displayed, press DISPLAY MODE several times until "CLOCK" indication appears.
Example: To set the time/date to 1:05 p.m., December 27, 1989

1   **Press SET while keeping ADJUST pressed.**

2   **Set the hour using the + or − buttons.**
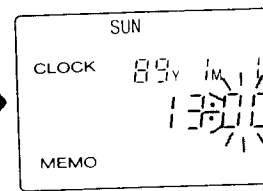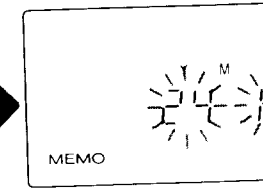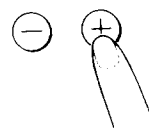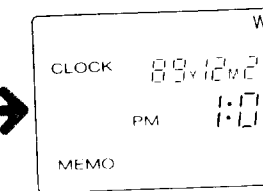When the + or − button is kept pressed, the digits advance rapidly.

3   **Press SET to make the minute digits blink.**

4   **Set minute, month, day, and year in sequence.**
First adjust the blinking item with + or − buttons, and then press SET.
(The day of the week is automatically set when the year, month and the day are registered.)

5   **Choose the 12- or 24-hour indication and then press SET.**
A flashing "12H" and "24H" alternately appear with each press of the + or − button.

The clock will now start.

To change the date/time
Press SET while keeping ADJUST pressed.
Press SET several times to make the digit you want to change blink. After changing the number, press SET several times (or press DISPLAY MODE once) until "CLOCK" indication appears.

Maintenance

Cleaning the heads

Prolonged use may contaminate the tape heads and the tape path. Contamination causes insufficient recording or sound drop-outs in playback.

To enjoy optimum sound, wipe the heads, capstan and pinch roller with a cotton swab moistened with alcohol after every 10 hours of use.

Record/playback head   Cotton swab

Capstan

Erase head   Pinch roller
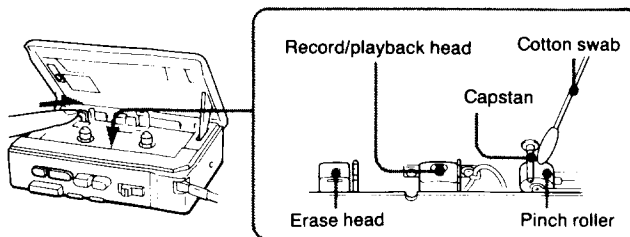
After cleaning, press the ■ ▲ button.

Cleaning the case

Do not use alcohol, benzine or thinner to clean the case.

Troubleshooting Guide

Trouble	Causes
Cassette cannot be inserted.	• The ▼ button is depressed.
The ● button cannot be depressed.	• No cassette in the cassette compartment. • The cassette inserted has had the tabs removed. Cover the slot with a small piece of plastic tape.
The ▼ button cannot be locked.	• The tape is completely wound towards the arrow direction on the cassette compartment lid. Rewind the tape with the ▲ button.
Tape does not move.	• Incorrect polarity of batteries. • Weak batteries. • The PAUSE switch slides down. • Battery operation is attempted while the AC power adaptor or car battery cord is connected to the recorder but not to the wall outlet or the cigarette lighter socket.
No sound from the speaker.	• The earphone is plugged in. • The VOLUME control is turned down completely.
Weak or distorted sound, sound dropouts, or excessive noise.	• Weak batteries. See "Battery installation". • Dirty heads. See "Maintenance".
No indication appears.	
Recording cannot be made or is unsatisfactory.	• Improper connection. See "Recording from various sound sources".
The wrong indications appear in the display window.	• Press RESET. (The indication will be cleared. Repeat the steps again from the beginning.)
No buttons function to set or change the indications.	
Memo cannot be entered for the material to be recorded.	• "TIMER" indication appears in the display window. Press DISPLAY MODE so that the current date/time display appears.
For timer recording, a memo cannot be entered.	• Set the date and time before entering the memo.
Memo display does not disappear.	• After displaying the date and time of recording and the memo, the indications remain displayed if you play back a cassette recorded on equipment other than TCM-27. To clear the indications, press DISPLAY MODE so that the current date/time display appears.
The date and time of recording and the memo do not appear during playback.	• The recording time is less than 10 seconds. For the time-index-recording function, it is necessary to record continuously for more than 10 seconds.

Specifications

Recording system	2-track 1-channel monaural
Frequency response	200-8,000 Hz (For normal tape TYPE I)
Power output (DC)	Speaker: 350 mW (at 10% harmonic distortion)
Input	Microphone input jack (minijack) sensitivity 0.2mV for 3kΩ or lower impedance microphone
Output	Earphone jack (minijack) for 8 – 300 ohm earphone
Power requirements	3V DC, two size AA (R6) batteries DC IN 3V jack accepts: • Sony AC-D2M AC power adaptor

Where purchased	Operating voltage
United Kingdom	240 V AC, 50 Hz
United States	120 V AC, 60 Hz

• Sony DCC-70 car battery cord (optional) for use on 12 V car battery

Battery life (hours)

Batteries	Recording
Sony batteries SUM-3 (NS)	Approx. 2.5
Sony alkaline batteries AM3 (N)	Approx. 7

|	
Dimensions	Approx. 91 × 119.2 × 39.7 mm (w/h/d) (3 $^5/_8$ × 4 $^3/_4$ × 1 $^5/_8$ inches) incl. projecting parts and controls
Weight	Approx. 310 g (11 oz) incl. batteries
Accessory supplied	Carrying case (1)

Optional accessories
AC power adaptor   AC-D2M
Car battery cord   DCC-70
One point microphone   ECM-202
Electret condenser microphone   ECM-K7, ECM-K8, ECM-011, ECM-D5
Foot switch   FS-10A
Monaural earphone   ME-81, ME-L82
Connecting cord   RK-G64, RK-G69

Your dealer may not handle some of the above listed optional accessories.
Please ask the dealer for detailed information about the optional accessories available in your country.

Note
Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.
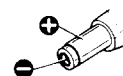
Polarity of the Sony plug

Design and specifications subject to change without notice.

Note: This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.